

**Tetra Tech, Inc.**

4213 State Street, Suite 100
 Santa Barbara, CA 93110-2847
 VOICE (805) 681-3100 FAX (805) 681-3108

Project: **Vandenberg Air Force Base**Log of Well No. **5-MW-7**
 Location: **Approximately 900 ft southeast of SLC-3E
 launch gantry, adjacent to 5-MW-3.**

Date Started: 5/3/99 Completed: 5/6/99

Logged By: W. Drake Checked By: K. McNamara, R.G.

Drilled By: J. Surigao, Valley Well Drilling *KM #6678*

Drilling Equipment: B-61 Mobile Drill HSA

Sampling Equipment: 2-inch & 2.5 inch I.D. Split Spoon

GS Elev.: 292.8 ft above MSL TD: 82 ft bgs

2" PVC Blank Casing: from 0 ft bgs to 60 ft bgs

0.01" Screening Casing: from 60 ft bgs to 80 ft bgs

Bentonite/Cement Grout: from 0 ft bgs to 52.5 ft bgs

Bentonite Transitional Seal: from 52.5 ft bgs to 56 ft bgs

2/12 Sand Filter Pack: from 56 ft bgs to 82 ft bgs

TOC Elev.: 295.49 ft above MSL

Depth (ft bgs)	MATERIAL DESCRIPTION	Material Symbol	Material Type	Well Construction	Sample	Blow Counts per 6"	Percent Recovery	PID (ppm) Amb/Smpl	REMARKS
5	<u>silty sand</u> , dark brown (10YR 3/3), fine to medium grained, well graded, subangular to subrounded, loose, dry, few coarse subangular sand, trace roots, fill/alluvium.		SM			9 9 12	100	0/0	Start drilling 0915. Sample V5MW7-0 submitted for laboratory analyses. Sample V5MW7-2 submitted for laboratory analyses.
	medium dense, slightly moist, no coarse sand.								
	<u>clayey sand</u> , light yellowish brown (10YR 6/4), fine grained, moderately graded, subangular to subrounded, medium dense, dry, some fines, few fine subangular gravel, alluvium.								
	<u>silty sand</u> , very dark grayish brown (10YR 3/2), fine to medium grained, moderately graded, loose, slightly moist, little fines, alluvium.								
	very moist.								
10	wet.		SM			5 6 7 3 4 5 2 4 6	75	0/0	Sample V5MW7-5 submitted for laboratory analyses.
15	dark yellowish brown (10YR 3/6).		SM			2 5 8	75	0/0	Sample V5MW7-10 submitted for laboratory analyses.
20			SM				5		Upper groundwater zone (perched) encountered at 12.5 ft.
							80	0/0	
							60		
							100	0/0	

64.6 ft bgs Groundwater depth during drilling (lower zone)

48.4 ft bgs Groundwater depth before sampling on 5/26/99

TC Number: A234-06

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Depth (ft bgs)	MATERIAL DESCRIPTION	Material Symbol	Material Type	Well Construction	Sample	Blow Counts per 6"	Percent Recovery	PID (ppm) Amb/Smp	REMARKS
20			SM						
							30		
25							60	0/0	
							60		
30	clayey sand, brown (10YR 5/3), coarse to fine grained, well graded, subangular to subrounded, slightly moist, some fines, few coarse grained sand, low plasticity.		SC				60	0/0	
	clayey sand and silty sand, brown (10YR 5/3), coarse to fine grained, well graded, subangular to subrounded, no plasticity, slightly moist, some fines.		SC/ SM				40		
35	clayey sand, brown (10YR 5/3), medium to fine grained, moderately graded, subangular to subrounded, slightly moist, some fines, low plasticity, slight (trace) iron staining, interlayered with few silt layers, light gray (10YR 7/2).		SC				40	0/0	TD of 6-inch auger at 34 ft. Reamed to 37 ft with 14-inch auger. End drilling with 14-inch auger at 1120 on 5/3/99. Set 10-inch diameter schedule 80 conductor casing at 32 ft using cement grout.
	silt, yellowish brown (10YR 5/4), medium dense to dense, slightly moist, no plasticity, trace medium grained sand.		ML			5 7 30 30 30	100	0/3.4	Start drilling 0910 on 5/6/99 with 8-inch auger.
40									
						7 8 11 15 15	100	0/6.8	
45									

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Depth (ft bgs)	MATERIAL DESCRIPTION	Material Symbol	Material Type	Well Construction	Sample	Blow Counts per 6"	Percent Recovery	PID (ppm) Amb/Smp	REMARKS
45	medium dense, slight plasticity, minor clay, no sand, few iron staining.		ML						
50	light olive brown (2.5YR 5/3), dense to very dense.					10 20 30 30 50	50	0/ 12.4	
55	<u>silty sand</u> , yellowish brown (10YR 5/8), fine to medium grained, moderately graded, subrounded, very dense, moist, little fines, few iron staining.		SM			10 10 15 30 30	40	0/8.3	
60	trace coarse grained subangular sand.					9 20 26 30 34	100	0/2.4	
65	little iron staining, trace subangular fine gravel.					13 29 30 32 40	80	0/ 16.6	
70	<u>silt</u> , light olive brown (2.5YR 5/4), dense, moist, minor clay, slight plasticity.		ML			13 23 27 23 45	20	0/6	Sample V5MW7-70 submitted for laboratory analyses.

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Depth (ft bgs)	MATERIAL DESCRIPTION	Material Symbol	Material Type	Well Construction	Sample	Blow Counts per 6"	Percent Recovery	PID (ppm) Amb/Smp	REMARKS
70	very dense, wet, few iron staining.		ML					0/0	
75						15 25 35	100	0/ 19.6	
80						25 40 40	100	0/8.2	TD of 8-inch auger at 82 ft. Construct 2-inch well from 82 ft.
85									End drilling 1230, 5/6/99.
90									
95									